

### CLAIMS

1. Telecommunication system including a mobile access network (UTRAN) coupled via a plurality of media gateways (MG1, MG2) to a packet switching network (IP) comprising an intermediate gateway (MG0) adapted to  
5 couple said media gateways to an external telecommunication network (TL),

said telecommunication system being adapted to establish via said intermediate gateway (MG0) a communication between a mobile telecommunication terminal (MT) coupled to said mobile access network (UTRAN) and a second telecommunication terminal (TS) coupled to said  
10 external telecommunication network (TL),

said mobile telecommunication terminal (MT) being adapted to be coupled to a first media gateway (MG1) of said plurality before a hand-over procedure and to be coupled to a second media gateway (MG2) of said plurality after said hand-over procedure,

15 said first/second media gateway (MG1/MG2) being adapted to encapsulate data from said mobile terminal into packets and to transmit, to said intermediate gateway (MG0), said packets each associated to a distinct reference value belonging to a predetermined series of reference values, a first predetermined series of reference values produced by said first media  
20 gateway (MG1) being different from a second predetermined series of reference values produced by said second media gateway (MG2),

**characterized in that** said intermediate gateway (MG0) is adapted to calculate a predetermined relation between the reference values of said second predetermined series and the reference values of said first  
25 predetermined series,

**in that** said intermediate gateway (MG0) is further adapted to transmit said predetermined relation to said second media gateway (MG2),

**and in that** said second media gateway (MG2) is adapted to modify said second predetermined series of reference values in order to  
30 synchronize said second predetermined series with said first predetermined series according to said predetermined relation received from said intermediate gateway (MG0).

2. Telecommunication system according to claim 1,  
**characterized in that** said predetermined relation calculated by said  
media gateway device (MG0) is the difference between a reference value  
5 of said second predetermined series and a corresponding reference value  
of said first predetermined series.

3. Telecommunication system according to claim 2,  
**characterized in that** said second media gateway (MG2) is adapted to  
10 modify said second predetermined series by subtracting said difference  
from the reference values of said second predetermined series.

4. Telecommunication system according to claim 1,  
**characterized in that** said mobile access network (UTRAN) is a circuit  
15 switched telecommunication network.

5. Telecommunication system according to claim 1,  
**characterized in that** said mobile access network (UTRAN) is a Terrestrial  
Radio Access Network [UTRAN] of a Universal Mobile Telecommunications  
20 System [UMTS].

6. Telecommunication system according to claim 1,  
**characterized in that** said packet switching network (IP) is adapted to  
operate according to the Internet Protocol [IP].  
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7. Telecommunication system according to claim 6,  
**characterized in that** said intermediate gateway (MG0) is an anchor media  
gateway at the boundary of said external telecommunication network (TL) that  
is a network of the Internet type,  
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8. Telecommunication system according to claim 7,  
**characterized in that** the Internet type of said external telecommunication

network (TL) is different from the Internet type of said packet switching network (IP).

5           9. Telecommunication system according to claim 1,  
**characterized in that** said intermediate gateway (MG0) is an anchor media gateway at the boundary of said external telecommunication network (TL) that is a Public Switched Telephone Network [PSTN].

10           10. Telecommunication system according to claim 1,  
**characterized in that** the reference values belong to a predetermined series of timestamps.

15           11. Telecommunication system according to claim 1,  
**characterized in that** the reference values belong to a predetermined series of successive sequence numbers.

20           12. Method to handle a hand-over procedure of a mobile telecommunication terminal (MT) coupled to a second telecommunication terminal (TS) via a media gateway (MG1, MG2) of a mobile access network (UTRAN) and an intermediate gateway (MG0) of a packet switching network (IP),

            said mobile telecommunication terminal (MT) being coupled to a first media gateway (MG1) before said hand-over procedure and being coupled to a second media gateway (MG2) after said hand-over procedure,

25           in said method the media gateway (MG1, MG2) coupled to the mobile terminal (MT):

            - generates reference values of a predetermined series,  
            - encapsulates data from the mobile terminal into packets and associates each packet with a distinct one of said reference values, and  
30           - transmits the packets and the associated reference values to said intermediate gateway (MG0),

the reference values of a first predetermined series generated by said first media gateway (MG1) being different from the reference values of a second predetermined series generated by said second media gateway (MG2),

5                    **characterized in that**, after said hand-over procedure, said intermediate gateway (MG0) calculates the difference between a reference value of said second predetermined series received from said second media gateway (MG2) and a corresponding reference value of said first predetermined series,

10                   **in that**, after the calculation, the intermediate gateway (MG0) transmits said difference to said second media gateway (MG2),

**and in that**, upon reception of said difference, said second media gateway (MG2) modifies said second predetermined series of reference values in order to synchronize said second predetermined series  
15 with said first predetermined series according to said difference received from said intermediate gateway (MG0).

13. Method according to claim 12, **characterized in that** said second media gateway (MG2) modifies said second predetermined series  
20 by subtracting said difference from the reference values of said second predetermined series.

14. Method according to claim 13, **characterized in that** said intermediate gateway (MG0) detects the changes from said first media gateway (MG1) to said second media gateway (MG2) and accordingly performs  
25 a temporary recalculation of the reference values of said second predetermined series into corresponding reference values of said first predetermined series until reference values of the modified second predetermined series is received at said intermediate gateway (MG0).

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